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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/700,321      | 01/16/2001  | Martin Weston        | 87805-9016          | 4846             |

23409 7590 05/09/2003

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| EXAMINER |
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TRAN, TRANG U

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| ART UNIT | PAPER NUMBER |
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2614

DATE MAILED: 05/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

12

**Office Action Summary**

Application No.

09/700,321

Applicant(s)

WESTON ET AL.

Examiner

Trang U. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7, 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 9 is objected to because of the following informalities: the phrase "according to claim 9" should be changed "according to claim 8". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brailean (US Patent No. 5,802,218) in view of Klippel (US Patent No. 6,005,952).

In considering claim 1, Brailean discloses all the claimed subject matter, note 1) the claimed comprising the steps of conducting the linear filtering operations on an input video signal to produce filtered signals, linear filtering operation comprising the taking of a weighted sum of pixels is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53). However, Brailean explicitly does not disclose the claimed three linear filtering operations on an input video signal to produce three filtered signals, and multiplying together said three filtered signals to produce an output video signal. Klippel teaches that in the third-order branch the input 388 is connected to three

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linear filters 392, 406 and 408, the output of these filters is multiplied by using the multipliers 402 and 410 and supplied to the linear filter 414 (Fig. 15, col. 10, line 65 to col. 11, line 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the third-order branch which includes three linear filters as taught by Klippel into Brailean's system in order to require a minimum of processing capacity in a digital signal processor (DSP) to keep the cost of the system low.

In considering claim 2, the claimed wherein said weighted sum is taken over pixels of the input video signal defined by a filter aperture is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 3, the claimed wherein all three linear filtering operations have the same filter aperture is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 4, the claimed wherein for at least one linear filtering operation, the taking of a weighted sum of pixels includes the output pixel of the respective linear filtering operation is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 5, the claimed wherein the product of two of said filtered signals is formed and a linear filtering operation conducted on that product, prior to

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multiplication of said product by the third filtered signal is met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

In considering claim 6, the claimed said three filtered signals are multiplied together without intervening filtering of the three filtered signals is met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

In considering claim 7, the claimed wherein a further linear filtering operation is conducted in parallel on the input video signal, with the result of said further linear filtering operation being combined with the multiplication product of said three filtered signals to produce an output video signal is met by the linear filter 384 and the summer 398 (Fig. 15, col. 11, lines 3-14) of Klippel.

Claim 8 is rejected for the same reason as discussed in claims 1 and 5.

Claims 9-11 are rejected for the same reason as discussed in claims 2-4, respectively.

In considering claim 12, the combination of Brailean and Klippel disclose all the limitations of the instant invention as discussed in claim 8, except for providing the claimed wherein there is further provided a linear filter connected between the output of said first multiplier and the input to said second multiplier. Using the linear filter is old and well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known linear filter connected between the output of said first multiplier and the input to said second multiplier into the combination of Brailean and Klippel's system since it merely selecting available component.

In considering claim 13, the claimed wherein there is a direct connection between the output of said first multiplier and the input to said second multiplier is met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

In considering claim 14, the claimed wherein the apparatus further comprises a linear filter path connected with the input terminal, and a combiner for combining the outputs of the linear filter path with the output of said second multiplier is met by the linear filter 384 and the summer 398 (Fig. 15, col. 11, lines 3-14) of Klippel.

In considering claim 15, the claimed wherein a filter is interposed between the output of the second multiplier and said combiner is met by the linear filter 414 (Fig. 15, col. 11, lines 3-14) of Klippel.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sita et al (US Patent No. 6,539,120 B1) disclose MPEG decoder providing multiple standard output signals.

Baudouin (US Patent No. 6,437,827 B1) discloses filtering video signals containing chrominance information.

Klippel (US Patent No. 5,438,625) discloses arrangement to correct the linear and nonlinear transfer behavior of electro-acoustical transducers.

Yan (US Patent No. 5,512,956) discloses adaptive spatial-temporal postprocessing for low bit-rate coded image sequences.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231


**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT  
April 30, 2003

  
**MICHAEL H. LEE**  
**PRIMARY EXAMINER**